

The Effect of Seed Treatment on Yields and Population of No-Till Soybeans

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Objective

To evaluate the effect of using a seed treatment (Bean Guard) on yield of no-till soybeans.

Background

Cooperator:	Morrow County Commissioners	Fertilizer:	None
County:	Morrow	Tillage:	No-Till
Nearest town:	Mt. Gilead	Herbicides:	Roundup Ultra 1qt/A + AMS
Soil Type:	Centerburg silt loam	Variety:	Midwest Genetics 3525RR
Previous Crop:	Soybeans	Row Width:	10 inches
Drainage:	Random tiled	Planting Date:	May 3, 2001
Soil Test:	pH 7.0, P 44 ppm, K 90 ppm	Planting Rate:	204,750 seeds/A
		Harvest Date:	October 22, 2001

Methods

Bean Guard is a fungicide seed treatment that can be applied at planting. It is a combination of Vitavax and Captan. Bean Guard is a systemic and contact fungicide for protection for soybean seeds and seedlings against damping off, seed decay, and seeding blights.

Bean Guard was applied as a planter box treatment at the rate of 2 ounces per 60 pounds of seed, and the other treatment was untreated. The treatments were replicated six times in a complete randomized block design. Individual plot size was approximately 1/2 acre. The beans were planted in 30-foot strips, and a 20-foot wide strip was harvested and weighed using a weigh wagon. The final population was calculated by counting the soybean plants in 1/1,000 of one acre between two rows in each individual treatment.

Results

Table 1. Soybean Population and Yield

Treatment	Population (plants/A)	Yield (bu/A)
Bean Guard	193,000	50.3
No seed treatment	190,833	50
LSD (0.05)	NS	NS
F	<1	<1
CV (%)	6.1	3.2

Summary and Notes

Ideal conditions existed for planting and for eight days after planting. Conditions from May 11 through the end of May were extremely wet and cool. A total of 5.88 inches of rain was received for the 30-day period following planting. Rain was received on 16 out of the 30 days. We were extremely surprised by the great stand at harvest for both the treated and untreated plots. There was no benefit of seed treatment this year in this field. Numerous fields in the county had to be replanted as the original planting date approached May 11. Seed treatment on those soybeans may have been beneficial. Seed treatment should be considered as insurance in the establishment of a good stand. The eight days of ideal weather and soil conditions immediately after planting apparently saved the stand this year in this field.

Acknowledgment

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